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Interior Regions 8, 9, 10 and 12

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State Agencies
Idaho
Nevada
Utah

GBCG Correspondence # 20-006

February 18, 2020

To: Chair, Great Basin Coordinating Group

From: Strategic Fire Planning Committee

Subject: Quantitative Risk Assessment Process Paper

Why Develop an Interagency Quantitative Risk Assessment?

Quantitative Risk Assessments (QRAs) are being developed by both the Department of the Interior (DOI) agencies and the USDA Forest Service (USFS) to guide strategic level decision making for fire and fuels planning. In most cases, these efforts are limited in scope and scale to a single agency or state with static variables and outputs. This assessment is truly unique in the sense that it encompasses multiple agencies within the Great Basin into a holistic and integrated phased approach. The tenants of the Cohesive Strategy, the purpose and need of the Shared Stewardship, and the needs of the Great Basin Coordinating Group (GBCG) require an all lands approach. The following outlines this approach to deliver a QRA for the Great Basin that involves the jurisdictional agencies and states represented in the GBCG. The deliverables will be designed to provide scalable and intuitive products that provide timely metrics of wildfire risk. The advantage of this approach is the scalability of this interagency assessment; from the geographic level to the unit level. In addition to scalability, the functionality of the assessment is conducive to the exchange of static and dynamic real-time components integral to a changing fire environment and user base, including firefighters, agency administrators, to fire leadership.

QRA Process:

The development and rollout of the Great Basin QRA will be a phased, multi-step process requiring interagency coordination along the way. The newly formed Strategic Fire Planning Committee (SFPC) will function as the technical advisory team and provide oversight for this project.

Phase 1: Initiation – In Process

Objective: Establish technical group, develop framework, and input data.

Phase 2: Static QRA Delivery – Spring 2021

Objective: Define static inputs, complete analysis, deliver conventional QRA.

Phase 3: Dynamic QRA Delivery – Spring 2022

Objective: Add dynamic weather and fuels inputs with automated outputs; accounts for spatial and temporal changes in forecasted weather using gridded 7-day forecast.

Anticipated Costs:

The financial impacts are currently being evaluated at this time and will be made available to the GBCG soon.

Desired Outcomes:

- 1) Utilize the SFPC within the Great Basin to assist with transition efforts to the new system, maintain interagency cooperation, standardize products where feasible, and expand geographic area knowledge and expertise regarding strategic fire planning and geographic area risk assessment. This working group can gather and expand communication with the field to discover and develop the tools, displays, and applications that field users need. This would require the development of a plan for the annual maintenance and validation of the strategic fire planning framework and landscape level updates.
- 2) Promote the development of institutional knowledge and specialized skills through interagency training and mentoring opportunities within the Great Basin. Foster an understanding of the inputs and processes used in the QRA, ensure the end products are utilized appropriately at the unit level, and promote integration with other decision support and intelligence gathering tools.
- 3) Complement existing portals and frameworks designed by state agencies to enhance functionality, including the ability to obtain the most current and real-time data to enhance capabilities. The end products will be service-based and available for inclusion in existing federal, state, and local decision-support applications.
- 4) Align the intent of the interagency risk assessment with the Cohesive Strategy in utilizing interagency partnerships and collaborative opportunities to restore and maintain ecosystems; promote fire adapted communities; and improve fire response. In addition to expanding on the Cohesive Strategy, this assessment will lend to further consideration of global perspectives emerging in wildfire response, planning, and coordination. Therefore, fostering collaboration with interagency partners, industry leads, and international fire organizations with a common voice: shared ownership in managing wildfire.
- 5) Utilize the best available science, including advancements in real-time weather, fuels, and fire behavior information to contribute to a dynamic forecasted 7-day risk assessment.
- 6) Integrate new technologies that provide scalable, efficient, and timely analytics and deliverables. This includes the use of gridded weather, fuels, and fire danger outputs that provide high resolution products sufficient for decision support at varying scales, from a single fire to a state to the Geographic Area Coordination Center (GACC).
- 7) Merge ancillary fire planning datasets and products. This includes developing new datasets that characterize highly valued resources across the GACC and leveraging spatial fire planning data currently contained in multiple, disconnected systems such as Fire Management Plans (FMPs), Wildland Fire Decision Support System (WFDDSS), Fire Danger Operating Plans (FDOPs), and other preparedness planning documents.
- 8) Foster the development of spatial fire planning products to promote accessibility, transparency, and informed decision-making in the Great Basin. The QRA processes and products can further support prioritization efforts for fire severity, fuels management, and analyze effectiveness over time.